CLAIM AMENDMENTS

Thus listing replaces all prior listings.

1. (CURRENTLY AMENDED) A cultured skin device comprising cultured dermal cells on ~~an engineered~~ a biocompatible non-perforated ~~reticulated~~ acellular matrix prepared from a matrix-forming collagen-containing fluid that is cast, frozen, and dehydrated ~~comprised of collagen~~, the dermal cells providing a cellular lamination layer within a shorter time period than is possible using a perforated matrix for cultured epidermal cells ~~deposited~~ inoculated thereon.

2. (PREVIOUSLY PRESENTED) The device of claim 1 wherein the epidermal cells are selected from the group consisting of keratinocytes, melanocytes, and combinations thereof.

3. (PREVIOUSLY PRESENTED) The device of claim 1 wherein the dermal cells are selected from the group consisting of fibroblasts, endothelial cells, and combinations thereof.

4. (PREVIOUSLY PRESENTED) The device of claim 1 for therapy in a patient with a burn, a burn scar, a chronic skin ulcer, a congenital skin lesion, and combinations thereof.

5. CANCELED

6. (ORIGINAL) The device of claim 1 wherein the matrix consists essentially of collagen.

7. (PREVIOUSLY PRESENTED) The device of claim 1 wherein the cells are selected from the group consisting of autologous, allogenic, and combinations thereof.

8. CANCELED

9. (ORIGINAL) The device of claim 1 capable of engraftment to provide at least one characteristic selected from the group consisting of an epidermal barrier, basement membrane, angiogenesis, and pigmentation.

10. (CURRENTLY AMENDED) A method of producing a cultured skin device comprising inoculating a ~~an engineered~~ biocompatible non-perforated ~~reticulated~~ acellular matrix prepared from a matrix-forming collagen-containing fluid that is cast, frozen, and dehydrated ~~comprised of collagen,~~ with cultured dermal and epidermal cells, and incubating said inoculated matrix under conditions sufficient to form a cultured

skin device within a shorter time period than is possible using a perforated matrix, the dermal cells providing a cellular lamination layer for the epidermal cells.

11. (ORIGINAL) The method of claim 10 wherein conditions comprise incubating in a medium containing a component selected from the group consisting of insulin, at least one essential fatty acid, vitamin C, and combinations thereof.

12. (CANCELED)

13. (ORIGINAL) The method of claim 10 wherein the dermal cells are inoculated prior to inoculating the epidermal cells.

14. CANCELED

15. (ORIGINAL) The method of claim 10 wherein the matrix consists essentially of collagen.

16-17. (CANCELED)

18. (CURRENTLY AMENDED) A method of producing a cultured skin device comprising isolating at least a first dermal cell type from skin, culturing the isolated cells, and inoculating the cultured cells to a ~~an engineered~~ biocompatible non-perforated ~~reticulated~~ acellular matrix prepared from a matrix-forming collagen-containing fluid that is cast, frozen, and dehydrated ~~comprised of collagen~~ by a method selected from the group consisting of submerged inoculation and lifted inoculation, and incubating ~~said~~ the inoculated matrix under conditions to form at least one dermal cellular lamination layer population within a shorter time period than is possible using a perforated matrix.

19-20. CANCELED

21. (ORIGINAL) The method of claim 18 wherein the cells are from a recipient of the skin device.

22. (PREVIOUSLY PRESENTED) The method of claim 18 wherein the cells are selected from the group consisting of allogeneic and autologous.

23. (ORIGINAL) The method of claim 18 wherein the cultured skin device is chimeric in genotype.

24. (CURRENTLY AMENDED) A method for producing a permanent cultured skin device for a burn patient comprising

isolating at least one dermal cell type and at least one epidermal cell type from an uninjured area of skin from a burn patient,

separately culturing the isolated dermal and epidermal cells,

inoculating ~~an engineered~~ a biocompatible non-perforated ~~reticulated~~ acellular matrix prepared from a matrix-forming collagen-containing fluid that is cast, frozen, and dehydrated ~~comprised of collagen~~ with the cultured dermal and epidermal cells and incubating the inoculated matrix under conditions to form a cultured skin device having a dermal cellular lamination layer to support an epidermal cellular layer deposited thereon within a shorter time period than is possible using a perforated matrix ~~one month~~ after inoculating the cells, and

providing the device to the patient.

25. (PREVIOUSLY PRESENTED) The method of claim 24 wherein the dermal cells are selected from the group consisting of fibroblasts, endothelial cells, and combinations thereof, and the epidermal cells are selected from the group consisting of keratinocytes, melanocytes, and combinations thereof.

26. (ORIGINAL) The method of claim 24 wherein the cultured skin device restores an epidermal barrier function.

27. (ORIGINAL) The method of claim 24 wherein the cultured skin device is vascularized within two to seven days of surgical application.

28. (CANCELED)

29. (CURRENTLY AMENDED) A method of producing a cultured skin device comprising

inoculating ~~an engineered~~ a biocompatible non-perforated ~~reticulated~~ acellular matrix prepared from a matrix-forming collagen-containing fluid that is cast, frozen, and dehydrated ~~comprised of collagen,~~ with cultured dermal cells,

incubating the inoculated matrix under conditions to form a cellular lamination layer of dermal cells,

inoculating cultured epidermal cells on the dermal cell lamination layer, and

incubating under conditions sufficient to form a cultured skin device within a shorter time period than is possible using a perforated matrix.

30-31. CANCELED

32. (CURRENTLY AMENDED) A method of inoculating a matrix with a cell suspension comprising

providing ~~an engineered~~ a biocompatible non-perforated ~~reticulated~~ acellular matrix prepared from a matrix-forming collagen-containing fluid that is cast, frozen, and dehydrated ~~comprised of collagen~~ overlying an absorbent material, the material saturated with a cell culture medium,

thereafter providing dermal cells suspended in a volume of culture medium to a topic surface of the matrix under conditions sufficient to draw the medium through the absorbent material and deposit the dermal cells on the matrix to form a cellular lamination layer within a shorter time period than is possible using a perforated matrix.

33. (PREVIOUSLY PRESENTED) The method of claim 32 wherein the undersurface of the reticulated acellular matrix is in contact with a substantially non-adherent, non-cytotoxic surface.

34. (CURRENTLY AMENDED) A method for producing a permanent cultured skin device for a patient comprising

isolating at least one dermal cell type and at least one epidermal cell type from an uninjured area of skin from the patient,

separately culturing the isolated dermal and epidermal cells,

inoculating ~~an engineered~~ a biocompatible non-perforated ~~reticulated~~ acellular matrix prepared from a matrix-forming collagen-containing fluid that is cast, frozen, and dehydrated ~~comprised of collagen~~ with the cultured dermal and epidermal cells and incubating the inoculated matrix under conditions to form a cultured skin device having a cellular lamination layer on the biocompatible reticulated acellular matrix within ~~one month~~ a shorter time period than is possible using a perforated matrix after inoculating the cells, and

providing the device to the patient.

35. (PREVIOUSLY PRESENTED) The method of claim 34 wherein the patient is burned.

36. (PREVIOUSLY PRESENTED) The method of claim 34 wherein the patient has a chronic wound.

37. (PREVIOUSLY PRESENTED) The method of claim 34 wherein the patient is a candidate for an elective surgery of the skin.